CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-8/922c/CEMENT/2015-16 Date: 16.08.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Technical Manager (West),** KRIDL, Bangalore.
***NAME OF THE WORK**	:	Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.
***REFERENCE**	:	BBMP/DZ/AEE/TDSD/PR/2015-16
SAMPLE ID	:	Cement - Sample 1
SAMPLE RECEIVED ON	:	14.08.2015
PERIOD OF TESTING	:	14.08.2015 to 16.08.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-8/922c/SAND-Gradation/2015-16 : 16.08.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates - Sample 1

Sample Received on : 14.08.2015

Date of Testing : 16.08.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.50	90-100	90-100	90-100	95-100
2.36	72.50	60-95	75-100	85-100	95-100
1.18	48.00	30-70	55-90	75-100	90-100
600 Micron	26.50	15-34	35-59	60-79	80-100
300 Micron	11.50	5-20	8-30	12-40	15-50
150 Micron	5.60	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-8/922c/AGG/GR/2015-16 : 16.08.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm) - Sample 1

Sample Received on : 14.08.2015

Date of Testing : 16.08.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.00	95-100	85-100
20	38.55	30-70	0-20
10	16.15	10-35	0-5
4.75	3.15	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-8/922c/CC Solid Block/2015-16 : 16.08.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the Work : Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16

Sample Received on : 14.08.2015

Date of Testing : 16.08.2015

Size of Blocks : 400mm x 200mm x 200mm

Cross Sectional Area : 80000 mm^2

Technical Reference : IS: 2185 (Part 1) - 2005

No. of Blocks Tested : 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.52	258.5	3.23	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.21	260.3	3.25	
3	Block 3	34.96	261.4	3.27	
4	Block 4	35.62	262.8	3.29	
5	Block 5	36.23	263.4	3.29	
6	Block 6	35.98	260.0	3.25	
7	Block 7	36.10	261.5	3.27	
8	Block 8	35.65	260.8	3.26	

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-4/822e/CUBE/2015-16 16.09.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 19.08.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.08.2015	16.09.2015	8.158	356.3	15.84
2	19.08.2015	16.09.2015	8.269	362.3	16.10
3	19.08.2015	16.09.2015	8.302	372.5	16.56

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-4/822e/CUBE/2015-16 17.09.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.08.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.08.2015	17.09.2015	8.118	478.6	21.27
2	20.08.2015	17.09.2015	8.275	510.3	22.68
3	20.08.2015	17.09.2015	8.390	522.6	23.23

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CSR-8/922c/Pre Cast Slab/2015-16 18.08.2015

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

* Name of Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Improvements and Construction of CC road and drain at Dhaneshwari road in Ward No.15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2015-16
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Pre cast slab
Sample Received on	:	14.08.2015
Date of Testing	:	18.08.2015

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.379	2506.79	1.54	0.955	31.85	16.22	17.52	16.73	20.91
2	50.00	78.00	0.385	2513.83	1.56	0.960	32.10	16.35	17.66	16.95	21.19
3	50.00	79.00	0.390	2514.25	1.58	0.965	33.20	16.91	18.26	17.62	22.03

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